

IN THE CLAIMS

Claim 1 (currently amended). Process for producing a partially self-adhesively treated backing material, comprising the following steps:

- a) coating a first backing material with a self-adhesive composition in the form of a plurality of individual, discrete domes and/or or a plurality of individual, discrete polygeometric structural forms, or both, the add-on of the self-adhesive composition to the backing material being at least 3 g/m² and the surface coverage of the backing material being at least 1%,
- b) ~~permanently~~ deforming at least some of the domes, polygeometric structural forms or at least some of each sufficiently to cause them to contact and become attached to other domes, or polygeometric forms or both, while substantially retaining the character of all of said domes and polygeometric forms as individual, discrete domes or polygeometric shapes.

Claim 2 (currently amended). Process according to Claim 1, wherein at least 10% of the domes, polygeometric structural forms or of both of them are ~~permanently~~ deformed.

Claim 3 (Cancelled).

Claim 4 (currently-amended). Process according to Claim 1, wherein ~~permanent~~ deformation of the domes or polygeometric structural forms takes place by

means of a controlled temperature regime during coating or by the introduction of radiative energy, mechanical energy, or by a combination thereof.

Claim 5 (amended). Process according to Claim 1, wherein the self-adhesive composition is applied to the first backing material by halftone printing, thermal screen printing or gravure printing or by ~~the nozzle~~ a spraying process.

Claim 6 (previously presented). Process according to Claim 1, wherein the add-on of the self-adhesive composition to the first backing material is greater than 6 g/m².

Claim 7 (previously presented). Process according to Claim 1, wherein the first backing material is a roller (6) or a belt, with an abhesive surface, the abhesive surface comprising a coating of silicones or fluorine compounds or a plasma-coated release system, which is applied with a weight per unit area of from 0.001 g/m² to 3000 g/m².

Claim 8 (previously presented). Process according to Claim 7, wherein said first backing material is a roller, the surface-temperature of which is adjustable and the abhesive properties of the surface are such that the applied self-adhesive composition adheres to the surface of the roller.

Claim 9 (currently amended). Process according to Claim 1, wherein the domes and/or polygeometric structural forms are transferred to a second backing material during or after the permanent deformation.

Claim 10 (currently-amended). Process according to Claim 7, wherein the domes, polygeometric structure forms or both are transferred to a second backing material during or after the ~~permanent~~ deformation, by guiding the second backing material against the adhesive surface of the roller (6) or of the belt by way of a pickup roller (7) which is positionable in the peripheral direction and/or radial direction with respect to the roller or to the belt and/or may force the second backing material against the domes, polygeometric forms or both, with pressure, so that the degree of ~~permanent~~ deformation may be influenced.

Claim 11 (previously presented). Process according to Claim 9, wherein the transfer of the self-adhesive composition takes place by means of a pair of deflection devices (8, 9) which is arranged at different positions along the periphery of the adhesive roller (6) or of the belt, the second backing material being guided a distance along the surface of the adhesive roller (6) or the belt.

Claim 12 (currently amended). Process according to Claim 11, wherein the deflection devices (8, 9) comprise rollers which are positionable in the peripheral direction, radial direction or both with respect to the roller (6) or belt and which optionally force the second backing material against the domes, polygeometric forms or both, with pressure, so that the degree of ~~permanent~~ deformation is optionally influenced.

Claim 13 (previously presented). Process according to Claim 1, wherein the first backing material has a surface which has a random or regular three-dimensional geometric structure.

Claim 14 (previously presented). Process according to Claim 1, wherein the self-adhesive composition is a hotmelt adhesive composition.

Claim 15 (previously presented). Process according to Claim 1, wherein the viscoelastic properties of the domes, polygeometric structural forms or of both are established by controlling the heat energy from the coating process, by the at least partial introduction of additional energy, or by the at least partial removal of heat energy, or by a combination thereof.

Claim 16 (previously presented). Process according to Claim 1, wherein the domes, polygeometric structural forms or both applied to the backing material have a plasticity-elasticity ratio at the time of deformation, at a frequency of 100 rad/s, of greater than 0.3 to 50.

Claim 17 (previously presented). Process according to Claim 14, wherein the hotmelt adhesive composition is in foamed form, and is optionally crosslinked by means of electron beams, UV or both.

Claim 18 (previously presented). Process according to Claim 1, wherein the side of the backing material opposite the adhesive has a bond strength to steel of at least 0.5 N/cm.

Claim 19 (previously presented). Plasters, medical adhesive tapes, wound coverings, doped systems, and orthopaedical and phlebological bandages and dressings comprising partially self-adhesively treated backing materials prepared according to Claim 1.

Claim 20 (previously presented). Plasters, medical adhesive tapes, wound coverings, doped systems and orthopaedical and phlebological bandages and dressing according to Claim 19, wherein following its production, the partially self-adhesively treated backing material is lined or provided with a wound pad or padding and/or is sterilized.

Claim 21 (previously presented). Industrial and reversible adhesive tapes comprising the partially self-adhesively treated backings prepared according to Claim 1, which on removal cause no damage or injury to substances of paper, plastics, glass, textiles, wood, metals or minerals.

Claim 22 (currently amended). A method for forming ~~technically permanent~~ bonds which can be separated only with partial splitting of the substrate which comprises forming said bonds with partially self-adhesively treated backing materials prepared according to Claim 1.

Claim 23 (previously presented). The process of claim 20, wherein said backing material is sterilized by γ (gamma) radiation